

## ABSTRACT

A method for integrating optical devices in a single growth step by utilizing a combination of Selective Area Growth and Etch (SAGE) is provided. An first device is formed between  
5 a set of oxide-masked regions, whilst a second device is formed in an adjacent planar region. By use of Selected Area Growth and Etch (SAGE), in which the growth between the oxide-masked regions is greater than the growth in the planar region, and in which the etch rate in the area between the oxide-masked  
10 regions is substantially the same as that in the planar region, the number of active quantum layers for the first device are formed between the oxide-masked regions, and a different number of layers for the second device is formed in the planar region.